

REMARKS

The present application was filed on February 6, 2004 with claims 1-24. Claims 1-7 and 9-25 are presently pending in the application. In the outstanding Office Action dated May 22, 2006, the Examiner has: (i) rejected claims 1-7 and 9-24 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,961,821 to Drake et al. (hereinafter "Drake"); and (ii) indicated that claim 25 is allowed.

In this response, Applicants respectfully traverse the §102(b) rejection. Applicants respectfully request reconsideration of the present application in view of the following remarks.

With regard to the §102(b) rejection, Applicants initially note that MPEP §2131 specifies that a given claim is anticipated "only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference," citing Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Moreover, MPEP §2131 indicates that the cited reference must show the "identical invention . . . in as complete detail as is contained in the . . . claim," citing Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Applicants respectfully traverse the §102(b) rejection on the ground that the Drake reference fails to teach or suggest each and every limitation of claims 1-7 and 9-24 as alleged.

Independent claim 1 is directed to a semiconductor device, comprising an integrated circuit die, the integrated circuit die having at least one chamfer extending from a top surface of the integrated circuit die to an intersection of first and second adjacent sides of the integrated circuit die, the chamfer having an upper surface which is angled relative to the first and second adjacent sides, and the chamfer being formed by an etching process.

The Examiner, in formulating the §102(b) rejection of claim 1 argues that each and every one of the above-noted limitations of claim 1 is anticipated by the teachings of Drake. Applicants respectfully disagree.

In characterizing the Drake reference as allegedly meeting certain limitations of claim 1, the Examiner relies primarily on FIGS. 9A-9E and the related text in column 4, line 49 through

column 6, line 32 of Drake. However, the relied-upon portions of Drake fail to anticipate the limitations as alleged.

Specifically, Applicants submit that Drake fails to teach or suggest an integrated circuit die having at least one chamfer disposed at an intersection of an upper surface of the integrated circuit die and first and second adjacent sides of the integrated circuit die, the chamfer having an upper surface which is angled relative to the first and second adjacent sides, as required by claim 1. In this regard, the Examiner contends that Drake discloses such an arrangement in FIG. 9D, where the Examiner analogizes groove 37 shown in FIG. 9D with the claimed chamfer. Applicants respectfully disagree with this contention. The term “chamfer” as recited in the subject claims is intended to refer to the flat, angled surface formed by removing a corner of the integrated circuit die (see, e.g., FIG. 2 of the present application which depicts an illustrative embodiment of the invention set forth in claim 1), rather than to a groove as the Examiner suggests.

The Examiner, with reference to FIG. 9E of Drake, states:

As depicted on Fig. 9E above, the chamfer (37) (i.e., upper surface) the bottom groove (38) (i.e., the bottom surface) are joined (i.e., the top and bottom sides of the IC die connected through the via and detached). In addition the chamfer 37 is angled relative to the front and the back side of the IC chip. As depicted in Fig. 9E, its clearly Drake disclose [sic] chamfer (i.e., a groove 37 as shown in Fig. 9D) extending form [sic] a top surface of the integrated circuit to an intersection of first and second adjacent sides (Office Action; page 8, paragraph 5).

Applicants assert, however, that the front and back sides of an IC die are not adjacent sides, as explicitly required by the subject claims. Rather, the front and back sides are opposing sides of the die. Consequently, Drake fails to teach or suggest the arrangement set forth in claim 1.

With regard to claim 1, Applicants' undersigned attorney wishes to thank the Examiner for the courtesies extended during the telephone conference on August 14, 2006. During the conference, agreement was reached that the prior art, namely, Drake, particularly FIG. 9E thereof, does not show a chamfer having an upper surface which is angled relative to the first and second adjacent sides of an individual integrated circuit die, as explicitly required by claim 1. Edge 37 of the die shown in FIG. 9E of Drake may be, arguably, more closely analogous to edge 302 of the embodiment shown in FIG. 3 of the present application, as acknowledged by the Examiner.

Independent claims 14, 18 and 22 include limitations similar to those of claim 1. Accordingly, claims 14, 18 and 22 are believed to be allowable for at least reasons similar to those described above with reference to claim 1.

With regard to claims 2-7 and 9-13, which depend from claim 1, claims 15-17, which depend from claim 14, claims 19-21, which depend from claim 18, and claims 23 and 24, which depend from claim 22, Applicants submit that these claims are also believed to be patentable over the prior art by virtue of their dependency from their respective base claims. Furthermore, one or more of these claims define additional patentable subject matter in their own right. Accordingly, favorable reconsideration and allowance of claims 2-7, 9-13, 15-17, 19-21, 23 and 24 are respectfully solicited.

In view of the foregoing, Applicants believe that pending claims 1-7 and 9-25 are in condition for allowance, and respectfully request withdrawal of the §102 rejection.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Wayne L. Ellenbogen", with a long horizontal flourish extending to the right.

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